Summary

The invention concerns an electrolyte for electroless deposition of metal layers with internal compressive stresses containing a metal base salt, a reducing agent, a complexing agent, an accelerator and a stabilizer. In order to make available an electrolyte of the said kind, from which uniform pore-free and crack-free metal-phosphorus coatings can be deposited with constant layers properties and high phosphorus contents at an elevated deposition rate over a long period of time, it is proposed by means of the invention that the electrolyte contain as metal base salt a metal salt whose anions contain at least one carbon atom and that is present in a starting concentration from 0.01 to 0.3 mol/L. At least one salt consisting of metal acetate, metal formate, metal oxalate, metal propionate, metal citrate and metal ascorbate, especially preferably metal acetate, is used as the metal salt whose anion contains at least one carbon atom. In addition, a method that is especially suitable for the use of the said electrolyte is proposed, where this method advantageously has a closed material circulation. Through the use of the invention especially pore-free and crack-free metal coatings with constant layer properties are uniformly deposited over a long time of use of the bath of at least 14-22 MTO.